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NOTICE OF ALLOWANCE AND FEE(S) DUE

25944 7590 10/08/2009

OLIFF & BERRIDGE, PLC
P.O. BOX 320850
ALEXANDRIA, VA 22320-4850

EXAMINER

BRUCKART, BENJAMIN R

ART UNIT

PAPER NUMBER

2446

DATE MAILED: 10/08/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/669,721

09/25/2003

Kiyotaka Ohara

116530

6410

TITLE OF INVENTION: DATA TRANSMITTING SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/08/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
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INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,721	09/25/2003	Kiyotaka Ohara	116530	6410

TITLE OF INVENTION: DATA TRANSMITTING SYSTEM

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	01/08/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
BRUCKART, BENJAMIN R	2446	709-223000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,721	09/25/2003	Kiyotaka Ohara	116530	6410
25944	7590	10/08/2009	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 320850 ALEXANDRIA, VA 22320-4850			BRUCKART, BENJAMIN R	
			ART UNIT	PAPER NUMBER
			2446	
DATE MAILED: 10/08/2009				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 742 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 742 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/669,721	OHARA, KIYOTAKA	
	Examiner	Art Unit	
	BENJAMIN R. BRUCKART	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 7-22-09.
2. ☒ The allowed claim(s) is/are renumbered 1-26.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
 - * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
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EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview and email with Rodney Rothwell on 9/16/2009.

The application has been amended as follows:

Claim Amendments

1. (Previously Presented) A data transmitting system for transmitting data to be processed through a TCP/IP-based network to which a plurality of devices including a first device and a second device are connected, the data to be processed being transmitted by said first device and received by said second device,

said first device including:

an identification information obtaining system that transmits first data through the network using a first address which does not specify a destination to obtain identification information of the plurality of devices except said first device, wherein the first data is a search packet that includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the first device, and a second multicast address for receipt of a search reply,

said second device including:

an identification information transmitting system that transmits second data containing the identification information of said second device through the network using the second multicast address in response to the first data transmitted by said identification information obtaining system of said first device, wherein the second data being the search reply that includes a destination address, which indicates the MAC address of the first device, a source address field, which is the identification information that indicates a MAC address of the second device;

said first device further including:

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a selecting system that selects one of the second devices that transmits the identification information to said identification information obtaining system of said first device;

a join request transmitting system that transmits third data to the second device selected as the destination of the data to be processed, wherein the third data is a join request packet that includes the MAC address of the selected second device and requests the selected second device to join a multicast group such that the first device and the selected second device can communicate with each other using a specific multicast address; and

a data transmitting system that transmits the data to be processed through the network to the selected second device using a third multicast address, which is the specific multicast address,,

said second device further including:

an acknowledgment transmitting system that receives the join request packet, determines whether it is possible to join the multicast group, and replies to the first device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet; and

a data receiving system that is configured to receive the data to be processed transmitted from said data transmitting system of the first device using the third multicast address if the data transmitted from said data transmitting system is data having said second device as the designated destination.

2. (Original) The data transmitting system according to claim 1, wherein the first address is a first multicast address.

3-6. (Canceled)

7. (Original) The data transmitting system according to claim 2, wherein the first multicast address, the third multicast address and the second multicast address are different from each other.

8. (Original) The data transmitting system according to claim 2, wherein at least two of the first multicast address, the third multicast address and the second multicast address are equal to each other.

9. (Original) The data transmitting system according to claim 2, wherein all of devices configured to be said second device on the network receive data transmitted by using the first multicast address.

10. (Original) The data transmitting system according to claim 1, wherein part of devices configured to be said second device on the network receives data transmitted by using the third multicast address.

11. (Original) The data transmitting system according to claim 1, wherein only said first device of the devices connected to the network receives data transmitted by using the second multicast address.

12. (Original) The data transmitting system according to claim 1, further comprising an address determining system that determines the second multicast address.

13. (Previously Presented) The data transmitting system according to claim 1, wherein said data receiving system of said second device transmits fourth data indicating an acknowledgement of receipt of the data to be processed when said data receiving system receives the data to be processed, said data receiving system transmitting the fourth data through the network using a fourth multicast address,

wherein said data transmitting system of said first device receives the fourth data transmitted by said data receiving system of said second device.

14. (Original) The data transmitting system according to claim 13, further comprising an address determining system that determines the third multicast address and the fourth multicast address.

15. (Original) The data transmitting system according to claim 14, wherein said first device and said second device join address groups whose addresses are determined by the address determining system.

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16. (Original) The data transmitting system according to claim 1, further comprising an address determining system that determines the third multicast address used for transmitting the data to be processed.

17. (Original) The data transmitting system according to claim 16, wherein said second device joins an address group whose address is determined by the address determining system.

18. (Original) The data transmitting system according to claim 16, wherein said first device includes said address determining system.

19. (Original) The data transmitting system according to claim 16, wherein said second device includes said address determining system.

20. (Original) The data transmitting system according to claim 1,
wherein said second device is a printer,
wherein the data to be processed is print data.

21. (Currently Amended) A terminal device for transmitting data to be processed through a TCP/IP-based network to which a plurality of devices are connected, comprising:
a processor executing systems:

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an identification information obtaining system that transmits first data through the network using a first multicast address to obtain identification information of the plurality of devices on the network, wherein the first data is a search packet that includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the terminal device, and a second multicast address for receipt of a search reply that is second data;

a selecting system that selects one of the plurality of devices that transmits the identification information to said identification information obtaining system of said terminal device;

a join request transmitting system that transmits third data to the selected device selected as the destination of the data to be processed, wherein the third data is a join request packet that includes a MAC address of the selected device and requests the selected device to join a multicast group such that the terminal device and the selected device can communicate with each other using a specific multicast address; and

a data transmitting system that transmits the data to be processed through the network to the selected device using a third multicast address, which is the specific multicast address, in order that the data to be processed is received by the selected device.

22. (Canceled)

23. (Currently Amended) A terminal device for receiving data to be processed through a TCP/IP-based network to which a plurality of devices are connected, comprising:

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a processor executing systems:

an identification information transmitting system that transmits, in response to a request including first data transmitted by a requesting device on the network using a first multicast address, second data containing identification information of said terminal device through the network using a second multicast address, wherein the second data being a search reply that includes a destination address, which indicates a MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the terminal device;

an acknowledgment transmitting system that receives a join request packet from the requesting device, determines whether it is possible to join a multicast group, and replies to the requesting device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet; and

a data receiving system that is configured to receive the data to be processed transmitted from said requesting device using a third multicast address if the data transmitted from said requesting device is data having said terminal device as a designated destination.

24. (Previously Presented) A method of transmitting data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the method comprising the steps of:

transmitting from said requesting device a search packet through the network using a first multicast address so as to obtain identification information of the plurality of

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devices, wherein the search packet includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

receiving at the requesting device second data that includes the identification information transmitted by at least one of the plurality of devices using the second multicast address designated by said requesting device, wherein the second data being the search reply that includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;

selecting and designating one of devices whose identification information has been received as a destination device;

sending third data to the destination device selected as the destination of the data to be processed, wherein the third data is a join request packet that includes the MAC address of the destination device and requests the destination device to join a multicast group such that the requesting device and the destination device can communicate with each other using a specific multicast address; and

transmitting from the requesting device the identification information of the selected destination device and the data to be processed through the network to the destination device using a third multicast address, which is the specific multicast address.

25. (Previously Presented) A method of transmitting data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a

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requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the method comprising the steps of:

transmitting from said requesting device a search packet through the network using a first multicast address so as to obtain identification information of the plurality of devices, wherein the search packet includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

receiving at the requesting device the identification information in the search reply transmitted by at least one of the plurality of devices using the second multicast address designated by said requesting device, wherein the search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;

selecting and designating one of devices whose identification information has been received as a destination device;

sending communication data to the destination device selected as the destination of the data to be processed, wherein the communication data is a join request packet that includes the MAC address of the destination device and requests the destination device to join a multicast group such that the requesting device and the destination device can communicate with each other using a specific multicast address;

transmitting from the requesting device the identification information of the selected destination device and the data to be processed to the destination device through the network using a third multicast address, which is the specific multicast address;

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receiving an acknowledgement of receipt of the data to be processed transmitted by said destination device using a fourth multicast address; and

repeating the step of transmitting identification information and data to be processed and the step of receiving the acknowledgement of receipt until the data to be processed is completely transmitted.

26. (Currently Amended) A method of receiving data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the method comprising the steps of:

receiving from the requesting device a search packet which is transmitted through the network using a first multicast address, wherein the search packet includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

transmitting identification information in the search reply through the network using the second multicast address designated by said requesting device, wherein the search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device; ~~and~~

selecting and designating a requested device whose identification information has been received as a destination device;

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_____ sending data to the destination device selected as the destination of the data to be processed, wherein the data is a join request packet that includes the MAC address of the requested device and requests the requested device to join a multicast group such that the requesting device and the requested device can communicate with each other using a specific multicast address;

_____ receiving the join request packet at the requested device, determining whether it is possible for the requested device to join the multicast group, and replying to the requesting device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet;

_____ transmitting the data to be processed through the network to the designated destination device using a third multicast address, which is the specific multicast address, if the join success reply packet is received by the requesting device; and

_____ receiving the data to be processed transmitted from the requesting device using the third multicast address if the data transmitted from said data transmitting system is data having said requested device as the designated destination device

~~receiving from the requesting device the identification information of said requested device and the data to be processed which are transmitted through the network using a third multicast address, if the data transmitted from said requesting device is data having said requested device as a designated destination.~~

27. (Currently Amended) A method of receiving data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a

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requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the method comprising the steps of:

receiving a search packet which is transmitted by said requesting device through the network using a first multicast address, wherein the search packet includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

transmitting identification information in the search reply through the network using the second multicast address, wherein the search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;

selecting and designating a requested device whose identification information has been received as a destination device;

sending data to the destination device selected as the destination of the data to be processed, wherein the data is a join request packet that includes the MAC address of the requested device and requests the requested device to join a multicast group such that the requesting device and the requested device can communicate with each other using a specific multicast address;

receiving the join request packet, determining whether it is possible for the requested device to join the multicast group, and replying to the requesting device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet;

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transmitting the data to be processed through the network to the designated destination device using a third multicast address, which is the specific multicast address, if the join success reply packet is received by the requesting device;

receiving the identification information of said requested device and the data to be processed which are transmitted by said requesting device through the network using [[a]]the third multicast address designated by said requested device, if the data transmitted from said requesting device is data having said requested device as [[a]]the designated destination device;

transmitting an acknowledgement of receipt of the data to be processed using a fourth multicast address when the data to be processed is received; and

repeating the step of receiving the identification information and data to be processed and the step of transmitting the acknowledgement of receipt step until the data to be processed is completely received.

28. (Currently Amended) A method of transmitting data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the method comprising the steps of:

transmitting a request for obtaining identification information of the plurality of devices except said requesting device from the requesting device through the network using a first address which does not specify a destination, wherein the request is a search packet that includes a destination address, which indicates the search packet as a broadcast packet, a source

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address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

receiving the request at the requested device;

transmitting the identification information in the search reply from the requested device through the network using the second multicast address designated by said requesting device in reply to the request, wherein the search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;

selecting and designating a requested device whose identification information has been received as a destination device;

sending data to the destination device selected as the destination of the data to be processed, wherein the data is a join request packet that includes the MAC address of the requested device and requests the requested device to join a multicast group such that the requesting device and the requested device can communicate with each other using a specific multicast address;

receiving the join request packet, determining whether it is possible for the requested device to join the multicast group, and replying to the requesting device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet;

transmitting from the requesting device the identification information of the requested device and the data to be processed through the network using a third multicast

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~~address, which is the specific multicast address, said requested device being designated as a destination of the data to be processed; and~~

receiving the identification information and the data to be processed at the requested device, if the data transmitted from said requesting device is data having said requested device as a designated destination device.

29. (Currently Amended) A machine-readable medium storing a computer program executable on a data processing device and usable to transmit data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the program comprising instructions for:

transmitting from said requesting device a search packet through the network using a first multicast address so as to obtain identification information of the plurality of devices, wherein the search packet includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

receiving at the requesting device the identification information in the search reply transmitted by at least one of the plurality of devices using the second multicast address designated by said requesting device, wherein the search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;

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selecting and designating one of devices whose identification information has been received as a destination device;~~and~~

sending data to the destination device selected as the destination of the data to be processed, wherein the data is a join request packet that includes the MAC address of the requested device and requests the requested device to join a multicast group such that the requesting device and the requested device can communicate with each other using a specific multicast address;

receiving the join request packet, determining whether it is possible for the requested device to join the multicast group, and replying to the requesting device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet;

transmitting from the requesting device the identification information of the selected destination device and the data to be processed through the network using a third multicast address, which is the specific multicast address; and

receiving the identification information and the data to be processed at the requested device, if the data transmitted from said requesting device is data having said requested device as a designated destination device.

30. (Currently Amended) A machine-readable medium storing a computer program executable on a data processing device and usable to receive data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a

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requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the program comprising instructions for:

receiving from the requesting device a search packet which is transmitted through the network using a first multicast address, wherein the search packet includes a destination address, which indicates the search packet as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

transmitting identification information in the search reply through the network using the second multicast address designated by said requesting device, wherein the search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;~~and~~

selecting and designating a requested device whose identification information has been received as a destination device;

sending data to the destination device selected as the destination of the data to be processed, wherein the data is a join request packet that includes the MAC address of the requested device and requests the requested device to join a multicast group such that the requesting device and the requested device can communicate with each other using a specific multicast address;

receiving the join request packet at the requested device, determining whether it is possible for the requested device to join the multicast group, and replying to the requesting

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device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet;

transmitting from the requesting device the identification information of the selected destination device and the data to be processed through the network using a third multicast address, which is the specific multicast address; and

receiving from the requesting device the identification information of said requested device and the data to be processed which are transmitted through the network using ~~[[a]]~~the third multicast address, if the data transmitted from said requesting device is data having said requested device as a designated destination device.

31. (Currently Amended) A machine-readable medium storing a computer program executable on a data processing device and usable to transmit data to be processed through a TCP/IP-based network to which a plurality of devices including a requesting device and a requested device are connected, the data to be processed being transmitted by said requesting device and received by said requested device, the program comprising instructions for:

transmitting a request for obtaining identification information of the plurality of devices except said requesting device from the requesting device through the network using a first address which does not specify a destination, wherein the request includes a destination address, which indicates the request as a broadcast packet, a source address, which indicates a MAC address of the requesting device, and a second multicast address for receipt of a search reply;

receiving the request at the requested device;

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transmitting the identification information in a search reply from the requested device through the network using the second multicast address designated by said requesting device in reply to the request, wherein search reply includes a destination address, which indicates the MAC address of the requesting device, and a source address field, which is the identification information that indicates a MAC address of the requested device;

selecting and designating a requested device whose identification information has been received as a destination device;

sending data to the destination device selected as the destination of the data to be processed, wherein the data is a join request packet that includes the MAC address of the requested device and requests the requested device to join a multicast group such that the requesting device and the requested device can communicate with each other using a specific multicast address;

receiving the join request packet, determining whether it is possible for the requested device to join the multicast group, and replying to the requesting device using the second multicast address with either a join success reply packet or a join unsuccessful reply packet;

transmitting from the requesting device the identification information of the requested device and the data to be processed through the network using a third multicast address, which is the specific multicast address, said requested device being designated as a destination of the data to be processed; and

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receiving the identification information and the data to be processed at the requested device, if the data transmitted from said requesting device is data having said requested device as a designated destination device.

32-33. (Canceled)

REASONS FOR ALLOWANCE

The following is the examiner's statement of reasons for allowance:

Renumbered independent claims 1-26 among other things teach: a first or a second device or a combination of both devices in network communication with each other; the first device broadcasts (multicasts) a request for identification information using a first address which does not specify a destination with a search packet which indicates a destination address- which indicates the search packet is a broadcast packet, a source address -which indicates the MAC address of the first device and a second multicast address for receipt of a search reply, the first device selecting a second device based on identification information, join request, transmitting system that transmits the data to be processed through the network to the second device using a third multicast address which is the specific multicast address; the second device transmitting second data in response to the request from the first device, where the second data being the search reply includes a destination address-the MAC of the first device and a source address-MAC of the second device, the second device also acknowledging the join request, replies with success or failure of the join and receives data transmitted on a third multicast address within a network environment.

The combination of features renders a non-obvious invention concept of features.

The prior art does not teach the cited limitation.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CORRESPONDANCE INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin R. Bruckart whose telephone number is (571) 272-3982. The examiner can normally be reached on 9:00-5:30PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Benjamin R Bruckart
Examiner
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/Benjamin R Bruckart/

Primary Examiner, Art Unit 2446